

## **Historic, archived document**

Do not assume content reflects current scientific knowledge, policies, or practices.





# Dixie Ranger





SPECIAL STATE FORESTRY ISSUE



STATE FORESTERS IN REGION 8

Alabama	Col. Page S. Bunker
Arkansas	Chas. A. Gillett
Florida	Harry Lee Baker
Georgia	Elmer E. Dyal
Louisiana	V. H. Sonderegger
Mississippi	Fred B. Merrill
North Carolina	J. S. Holmes
Oklahoma	G. R. Durrell
South Carolina	H. A. Smith
Tennessee	James O. Hazard
Texas	E. O. Siecke



COOPERATION

"We must all hang together, or assuredly we shall all hang separately", Benjamin Franklin is reported to have said at the signing of the Declaration of Independence.

It ain't the guns nor armament,  
Nor funds that they can pay,  
But the close cooperation,  
That makes them win the day.

It ain't the individual  
Nor the army as a whole,  
But the everlasting team work  
of every bloomin' soul.

-J. Mason Knox.



# THE DIXIE RANGER

U. S. FOREST SERVICE, SOUTHERN REGION, ATLANTA, GEORGIA.  
-----  
JOSEPH C. KIRCHER, REGIONAL FORESTER.  
-----

Volume 2

February 1937

Number 14.

## STATE AND PRIVATE FORESTRY

Cooperative fire control on state and private lands started under the Clarke-McNary Law in 1911. At first only a few states had forestry departments with which the Federal Forest Service was able to cooperate and give financial assistance but the Government encouraged the formation of state forestry in the others until now practically every state in the Union where private timberlands are an important resource has a state forestry department.

For many years emphasis by the Federal Government in its forestry cooperative relations with the states was rightly placed on fire control and the states necessarily expended most of their efforts and funds in securing better fire control over an ever increasing area. This concentration of effort has brought fire control in the eleven states of Region 8 to its present status where of the 192 million acres of forest land about 63 million are protected by the states with financial assistance from the United States under the Clarke-McNary Law. Some of this is very extensively protected, and considerably more funds will be needed in order to bring protection up to standard. In addition to the 63 million acres protected by the states, there are about 8 million acres in National Forests in the South protected by the Federal Government alone.

There is yet a large job of fire control ahead and cooperative efforts must not be lessened. In fact there is need for additional funds - both Federal and State - and a lot more effort if the entire job is soon to be reasonably well done. Yet more and more it is being realized that protection alone is not the whole problem. States through their Forestry Departments and their extension foresters have seen beyond mere fire control and have been encouraging better woods practices. The Federal Government, too, assisted in securing better forest practices in the South, but for many years only in a small way. In fact most of its effort was merely the work of one man - Austin Cary - who more than any other man has left his imprint on forestry in the longleaf and slash pine territory.

With the coming of the various industrial "codes" in 1933 a real opportunity seemed to present itself to get both increased fire control and better woods practices. After many conferences with lumbermen, code authorities, state officials and others, minimum requirements

for woods practices were written into the lumber codes and the press gave the lumber industry and the foresters "a great hand". Overnight forestry was to be practiced on all forest lands and everything would be lovely - at least so it appeared from press comments - but everyone apparently overlooked the fact that things won't do themselves merely by putting a law on the Statute Books. You know what happened to the codes - they're gone - yet the lumber code served a useful purpose. It brought forestry much nearer to the lumber industry than ever before and it made a lot of lumbermen and timberland owners think. I believe it was not wasted effort if it is properly followed up, and that is exactly what the U. S. Forest Service is trying to do through its present Division of State and Private Forestry.

This Division handles the Clarke-McNary work in cooperation with the states, but in addition it is organizing to assist the states to get better forestry in the woods and to study and advise as to the practice of forestry on a sustained yield basis. There is no basic law which allows cooperation with states in forest management on state and private lands and the U. S. Forest Service can not give financial assistance to the states in forest management (except for farm forestry under Section 5 - Clarke-McNary Law) as it does in fire control. In view of the great need for this management work, however, the U. S. Forest Service has allotted some of its regular funds for this purpose and is attempting to promote better management of private forest lands. This work for the most part is being done in cooperation with the State Foresters. It is especially important that work of this character be undertaken at this time when there is a large influx of pulp mills to the South.

Studies and advice as to sustained yield possibilities and better cutting methods are undertaken either upon request from State Foresters or others in cooperation with them. There is no intention of crowding State Foresters, Extension Foresters, or consulting foresters out of the picture; in fact quite the opposite is desired. After all they must take an active and important part in creating interest in sustained yield, in initiating projects, and in doing the extension work. The U. S. Forest Service backs up the play by throwing in its resources in studies, in advice, and in recommendation as to how the desired ends may be attained. It assists in bringing together the various interested agencies and in working out a mutually acceptable program of action. It can not, however, take over the extension field of State Foresters and Extension Foresters among timberland owners nor that of consulting foresters, but it expects through its work on sustained yield to broaden the field and activities of the State agencies and to create additional opportunities for consulting and private foresters.

Joseph C. Kircher,  
Regional Forester.

## THE FORESTER IN THE SOUTH

By H. A. Smith,  
South Carolina State Forester.

The forester in the South today is standing in a peculiar position. As a result of the attitude of the National Administration, of the activities of various emergency organizations, both resulting in an improved attitude on the part of the general public, he is standing in a position which was not thought possible of attainment five years ago.

Pulp mills are introducing a new factor to forestry in the South. In the past foresters have made recommendations which they felt were sound but which were in general directed at saw timber production, and at a rotation in which possible mistakes could not be determined for some time to come. The year 1937 finds the foresters in high places. What the future brings forth will depend very largely upon the foresters. He is in a delicate position. It is impossible to say how much of the present increased interest is due to sound forestry.

Reductions in emergency work are promised. The maintenance of work accomplished is an immediate necessity. Money must now go out without so much coming in. A few fires will remove the enthusiasm of some of the new converts to forest protection. Those interested in pulp wood sales want recommendations which will return a profit not in twenty-five years but in ten. With the perspective reduced they can see, or think they can see, the fallacy of faulty recommendations. The forestry which is practiced will be practiced by hardheaded business men, interested not so much in a cord and a half an acre a year "if everything goes right" as in three quarters of a cord per acre per year without any doubt. Legislators who have been friendly may lose their friendliness as camps begin to disappear. All of this represents a challenge to the foresters, not to the State Foresters alone but to the members of all forestry organizations.

It has been easy to criticize in the past the work of the foresters in other setups. The desire to handle all work on the part of certain organizations has had a tendency to increase this criticism. This cannot go on. It is time that all foresters get together. That the forestry activities within one State have the benefit of the advice and counsel of all the foresters within the State regardless of the organization carrying on the work. It is essential that that work have the approval, at least in principle, of them all. It is essential that each organization support the activities of the other. The jealousies, the differences of opinion, the bickering and the fighting must be abandoned in the interest of an organized front. Without that organized front in the Legislative halls of Congress and the States and in the court of public opinion foresters will find charges against them that they may be unable to refute.



All State Foresters have made enemies. There is nothing serious in that. Gifford Pinchot says it is only then that something is being done. But in spite of these enemies State Forestry organizations in the southeast have mounted to a pinnacle in ten years which was not achieved by the older States after twenty-five years of operation. Whether we are dropped from that pinnacle and lost in the shuffle of conservation reorganization, or whether we continue to climb to still greater heights depends upon our ability to recognize the fact that foresters have not really climbed into their present position as a result of their own ability and the strength of their cause, but that we have actually been kicked to where we are and that the real test of our ability will be seen in the tenacity with which we hold to what we have attained. This calls for a spirit of whole hearted cooperation, a united front of all organizations concerned.

- - - - -

TEXAS FORESTRY COMMENT

By E. O. Siecke,  
State Forester of Texas.

Texas is the most western State in Region 8. Texas is the largest State in Region 8. Texas has more plains, cowboys, and agricultural land than any other state in the deep South. And, contrary to popular belief, Texas also has forests. In round figures, there are 35,000,000 acres in forest land, which is one-fifth of Texas' total land area. Approximately twenty-two and one-half million acres of this area are primarily protection forests. The remaining twelve and one-half million acres are made up in the East Texas pine and hardwood belt. It is in this eastern commercial timberbelt that the activities of the Texas Forest Service of A. and M. College are at present chiefly centered.

Over 10,000,000 acres in the pine belt are now under protection by the Texas Forest Service through its Division of Forest Protection located at Lufkin. At the present time equipment for the detection and accurate location of fires includes 72 lookout towers and 6 tree cabs. By the end of 1936, 1,333 miles of telephone lines had been built by the CCC to serve these lookout towers and the suppression personnel. In addition to these improvements the operation of the CCC forest camps has also made possible the construction of 2,423 miles of forest truck trails and 6,767 bridges and culverts. These forest roads greatly reduce the travel time to and from fires and also serve as fire lanes. Since the initiation of the CCC activities, Texas has made available more than \$60,000 through special appropriation items to be used by the Texas Forest Service so as to more fully cooperate in this work.

Texas, like the other southern states, has a big problem in fire prevention. A recent summary of records kept over a period of ten years reveals that fires annually burned over one of every thirty-five acres protected. Limiting the loss from forest fires to 63,201 acres in 1935 marked the first time in the twenty year history of the Service that the area burned has been less than one percent of the area protected. This was a 70% reduction over the past ten year average. Compilations for 1936 show that fires burned over about two percent of the area protected.

Man is still "Forest Enemy No. 1" in Texas, causing over 99% of all the fires. Approximately 70% of all the forest fires in 1936 were caused by smokers and "fire bugs". Prevention of forest fires from careless causes is being fought through educational methods. Two educational motorized motion picture units operating throughout east Texas gave 447 combined forest lectures and motion picture shows to over 69,000 people in 1936. In addition, the CCC motion picture operator gave 195 motion picture shows in the CCC camps during the year to an attendance totaling over 27,000 people. Public roads, camping grounds, fishing streams and other wooded areas frequented by the public have been posted with fire warning signs. During 1936 the forest patrolmen interviewed close to 6,000 farmers, stockmen, campers, loggers and other citizens concerning fire protection. They also distributed 33,000 pieces of literature to pupils in 680 schools. Civic clubs and chambers of commerce in the timber belt have been contacted and many of them have adopted strong measures against woods burning.

Educational methods have evidently been inadequate, however, with that class of people who insist on wilfully setting out fires. A State law enacted in 1925 made the intentional setting of fires on another's property or letting fires carelessly escape to another's property a misdemeanor subject to action by law. Up until 1936, however, the Texas Forest Service had been hesitant about applying the law, feeling that better results could be obtained by further educational efforts. It was only after careful study and with much reluctance that the Service last year resorted to active law enforcement to decrease the growing number of carelessly or maliciously set fires.

Early in 1936 a fire law enforcement officer with a Texas State Ranger's commission was made responsible for investigating fire law violations. Since that time, action has been taken against 37 fire law violators. To date 18 convictions have been secured and 8 cases are awaiting court action. Four cases were settled by agreement between the State and defendant. One defendant fled the State, forfeiting his bond; four cases were dismissed because of technicalities while only 2 of all the defendants involved were acquitted by jury. Thirteen other cases, not included above, were investigated against minors. All of these admitted

their guilt but no court action was taken against them. Public sentiment is growing against burning the woods in east Texas. County courts and county officials have for the most part given splendid cooperation and backing in rendering favorable decisions and verdicts.

During the past year cooperative Clarke-McNary Section 4 work was initiated in west Texas, the main nursery being located 500 miles west of the Texas Forest Service headquarters. The project is supported by a \$5,000 State appropriation and a \$1,600 Federal allotment. Although this work is in its infancy, a gratifying amount of interest on the part of landowners has been manifested and the demand for forest plant material will undoubtedly utilize the entire quantity that can be produced. At this time shelterbelts around farmsteads are being stressed to a greater degree than wind-breaks for field crops.

#### THE PROGRESS OF FORESTRY IN FLORIDA

By Harry Lee Baker,  
State Forester of Florida.

Less than four years ago the press of the United States flashed the news of a huge conservation of natural resources program to the people of the country. How many recall the general misunderstanding of the objectives and needs of such a conservation program, and the terms applied in describing it among the rank and file of the citizens? Forestry has been practiced on private, State, and Federal lands for years, yet the people as a whole had no clear cut conception of the nature of the work to be undertaken by the CCC camps. This is certainly no criticism of the intelligence of our people, but clearly demonstrates the vital need of an increased amount of educational work through which a knowledge of forestry can be conveyed to every man, woman, and child. An indifference to the condition of the country's forest resources would not have existed if its citizens had possessed a more complete knowledge of forestry and all other natural resources.

Florida has undertaken to correct this situation by the passage of a law which requires the study of the conservation of natural resources in the public schools of the State. The colleges and universities are also stressing the subject in their curricula for all students, and especially for those who are training to become teachers. The measure provides a very progressive step in forestry education because it reaches the youth of the State who will soon become the leaders. It is important that future generations be made to realize that natural resources are the



basis for all creative wealth; that they are the foundation of our industry and commerce, and that it is absolutely essential to continue these resources in order to maintain the economic and social stability of the State. Anything so essential to the well being of our citizens and youth should be considered as fundamental education, and, as such, has a rightful place in the public school curriculum.

In addition to the study of forestry in the elementary grades, other educational projects are being carried on in cooperation with the Boy Scouts and the Vocational Agricultural division of the office of the State Superintendent of Public Instruction. These projects reach the urban and rural boys of high school age and are designed to acquaint them with their civic responsibility in caring for the forests, as well as to demonstrate desirable practices to be applied in the proper management of the forests and farm woodlands. A free two-weeks camping trip to a forestry training camp, which is awarded to boys selected for outstanding work in these projects during the year, has proved to be a valuable educational undertaking.

All educational efforts, to be completely successful, must be followed by concrete evidences of the work. Today there are 422 landowners and three counties cooperating with the Florida Board of forestry in the prevention and control of woods fires. As of December 31, 1936, practically 2,300,000 acres of forest land were under contract for fire control, which is an increase of 8.9 per cent over the year 1935. Although 64,928 acres of protected area were burned, they represent only 2.84 per cent, which is a satisfactory record. Definite progress has been made in reducing the area burned by years as indicated in the following listing of percentages.

<u>Year</u>	<u>Per Cent Area Burned</u>
1931	11.38
1932	11.18
1933	6.40
1934	6.97
1935	5.04
1936	2.84

Of the total of 1934 fires which burned during the calendar year of 1936, 72.6 per cent was caused by incendiaries.

Not many months ago the people of two counties voted five to one authorizing the county commissioners to expend funds for fire control in cooperation with the U. S. and Florida Forest Services. When this area comes into the fold it will increase the protected



lands by more than 500,000 acres. Adding to this total public lands operated by the U. S. Forest Service, Resettlement Administration, and U. S. Biological Survey, more than 4,000,000 acres are being protected in the State. While this is not enough, it represents one-fifth of the total forest area of the State, which is 22,072,500 acres, and is a substantial start toward the goal of state-wide fire control. An increasing number of landowners and counties are advancing funds each year for this work, indicating that they are satisfied with the results. Three types of cooperative agreements are offered by the Florida Forest Service in conjunction with the U. S. Forest Service. A continuous agreement is offered landowners who live on their property or who have resident managers to take charge of fire control work at a cost of three cents per acre per year; and a group unit contract is offered one or more landowners who care to have the Florida Forest Service take responsibility for the work and pay at the rate of five to eight cents per acre per year, depending upon the area. The money expended by the Florida Forest Service under these types of agreements amounts to three cents per acre per year. The agreement offered county commissioners to be used in listing counties for fire control, after it has been approved by the electorate of the county, stipulates that the county commissioners and the Florida Forest Service shall each expend three cents an acre yearly, for the acreage to be protected. The share of the Florida Forest Service shall never exceed that of the county commissioners. When ECW or other Federal agencies expend one-half as much in fire prevention and control in a county as that deposited by the county commissioners, the Florida Forest Service may not allocate to exceed one-half the amount deposited by the county commissioners.

Definite progress has likewise been made in increasing the effectiveness of the detection and suppression organizations in order that the area burned on protected lands can be reduced to a minimum. One of our county organizations is now equipped with a short wave radio broadcasting station and each fire fighting truck is equipped with a short wave receiving set. This improved method of controlling fires will increase the confidence of landowners in the ability of the county organization to stop woods fires quickly.

Other measures have been provided which will lead toward more rapid expansion of the work in the future. The fire laws have been materially strengthened whereby definite responsibility can be placed upon individuals or classes of wood burners for violation of the law. A basic set-up has been provided for the cooperation of county commissioners in county fire control. The Florida Forest Service is, however, unable to expand its work any faster than the landowners or counties cooperate, because the Forest Service is committed to a policy of helping those who help themselves. The molding, through educational work, principally in the schools, of a public opinion which is sympathetic to a forest conservation program in conjunction with the demonstrations of organized fire control are the principal factors leading to a rapid increase of protected area in the State.

## OKLAHOMA NOTES

By Glen R. Durrell,  
State Forester of Oklahoma.

The Oklahoma Forest Service is protecting 1,400,000 acres of timber land from fire. In 1936 approximately six per cent of this area burned over. It is estimated that at least fifty per cent of the forest area not under protection burned during the year. 91 per cent of the fires were charged to incendiarism.

Only superlative derogatives can describe the 1936 fire season. Fires occurred on 221 days during the year. May and June, normally our two light months, had 14 and 25 fire days respectively. Beginning July 24, we had a period of 53 days with from one to twenty fires each day! Rainfall deficiency, periods of low visibility due to dust storms, and an unduly prolonged season of high winds combined to make one of the worst fire years we have experienced in this State.

Eight towers were in operation throughout the year. Suppression was handled by two State CCC camps, by the regular State organization, and by emergency help from a State Park camp. Two push type fire plows were used in the more hazardous areas. One of these tractor mounted plows has been in operation since July, 1931, and has given very satisfactory service. It has been used in rough, rocky country with good results.

At the State Forest tree nursery 499,000 seedlings were grown and distributed during the calendar year. These trees are used primarily for windbreaks around farm buildings and feed lots. An increasing number are being used each year for the establishment of woodlots. These will be used chiefly for post production. The nursery was operated during 1936 under a cooperative agreement with the Plains-Shelterbelt project.

The Plains-Shelterbelt project will undoubtedly increase the demands for Section 4 planting stock in this State in the future. The project has demonstrated that trees will grow under adverse conditions if properly planted and given some care during the growing season. Better than 60% of the trees planted have survived in spite of the drouth of the past year. We are now receiving orders to fill gaps in some of the plantings and to establish similar plantings outside of the shelterbelt area.

Our proposed legislative program this year includes revision of the fire law so that cases can be tried in Justice of the Peace courts, enabling legislation for cooperation under the Fulmer act, and an increased appropriation.

## FOREST MANAGEMENT IN TENNESSEE

By James O. Hazard,  
State Forester of Tennessee.

The forests of Tennessee originally covered practically the entire twenty-six and one-half million acres of land within the State. They now cover approximately fourteen million acres. They have been stripped of their more valuable timber and have been burned severely until their present production is small as compared with that of twenty-five or thirty years ago. Not only has the timber been heavily cut and the remaining trees abused, but the wildlife which is an important asset in forest management has been greatly reduced. Deer, turkey, and grouse, which should thrive in much of the forested area of the State, are only found in very limited numbers.

The problem of Tennessee is to set up a type of forest management which will restore high-grade timber trees to our forests for the support of permanent high-class wood industries, restore the more valuable types of game, fur bearing animals and other wildlife to the forests, protect streamflow and thus provide an abundant stock of fish, and encourage esthetic silviculture to increase the attractiveness of our forests for recreation. Scientific forest management provides for the well rounded use of forests for the objectives outlined above. The Forestry Division is working on a definite program, which, if completed, will give the State a systematic forestry service which should accomplish all of the above objectives as quickly as the requirements of the individual objectives will permit. It is proposed to establish approximately 100 ten-thousand-acre State Forests, approximately twenty miles apart to serve as "Forestry Service Stations." Each would serve approximately 250,000 acres of surrounding lands. Timber growing would be encouraged by demonstrations and by fire control. The State Forests would serve as wildlife sanctuaries where game-food trees and shrubs would be encouraged to permit a maximum stocking of wildlife in a protected area from which surpluses would flow out to the surrounding lands. So long as the CCC is available, stream improvements could be installed on the State Forests and within the service areas to promote fish life, provide flood control structures, natural fire lines to help control forest fires, and more abundant water supplies for fish and other wildlife. In the end, each service area should become one large cooperative unit in which State and private interests would join in systematic forest management.

During the past three years, 36,000 acres in eight tracts have been proclaimed State Forests by Governor McAlister, under a law passed in 1933 which authorized the Governor to take such action as a measure of cooperation in the President's reforestation program. 115,000 acres in seven areas have been acquired



by the Resettlement Administration for Forestry and Park purposes with an understanding that they will be turned over to the State Forestry Division when Federal development on them is completed. Thus a beginning on fifteen State Forests or Parks has been accomplished. As rapidly as facilities will permit, these areas will be made productive units for the purposes outlined as a part of our Forestry program.

It is timely in this connection to mention the great amount of reforestation which has been accomplished in Tennessee during the past four years. Approximately twelve million trees have been grown and planted by or under the direction of the Forestry Division with the aid of the CCC in addition to large quantities planted by the TVA, the Resettlement Administration, and the Soil Conservation Service. Through this reforestation program many waste areas which were a burden on our taxpayers are being put to productive use. This reforestation work, in addition to protecting the soil and water supplies, provides additional game cover.

Forest fire control, which is the one greatest activity in improving the environment of wildlife, has received a tremendous impetus through the CCC work. Approximately five million acres are now receiving intensive service in fire control. Approximately 60 fire lookout towers will have been established for service by the next forest fire season, each with telephone lines connecting the towers with forest wardens. It is now believed that fifty additional towers will completely cover the State in the areas where fire control service is needed. It is hoped that this service will be completed through the aid of the CCC.

The value of the forests is more fully appreciated at this time than ever before by our average citizen. We do not have the acute appreciation of forests which has been developed in Europe where good forestry has been practiced for generations. We have not yet assumed the regulation of forestry on private lands as has been assumed to some extent in nearly all of the countries of Europe. It is probable that public welfare will demand strict regulation of the use of forest lands eventually in this country. It is hoped that educational methods will lead American citizens to practice good forestry without too much compulsion. However, healthy forests with their natural quotas of timber, game, and other wildlife should be maintained on a normally productive basis. If it becomes necessary to make laws to insure proper forest use, it is certain that the American people will insist upon their passage when the need is completely understood.

- - - - -

THE MISSISSIPPI FORESTRY PROTECTION TAX

By Fred B. Merrill,  
State Forester of Mississippi.

Organized fire control has advanced very rapidly in Mississippi through the provisions of the forest protection tax enacted in 1932. The law provides that county boards of supervisors in their discretion may levy up to three cents per acre on timbered and uncultivable lands for forest fire control costs, and must make such a levy upon petition by a majority of the free holders in the country or a definitely described portion thereof.

Under this act, eight counties were cooperating prior to the fall of 1935, at which time nine additional counties made the necessary levy.

To administer all forestry and park work in Mississippi, the State appropriates only \$15,000 per year. With this limited state appropriation, of which not more than half can go to fire control, the forest protection administrative personnel is necessarily very limited, and in fact, at the present time, only one technically trained forester is available to supervise all protection work. Naturally, adequate supervision has been impossible, under the greatly expanded program and consequently the work has not been entirely satisfactory.

As a result, a large number of free holders in three of the counties have protested against continuing the work, and it seems possible that these three counties will withdraw from the cooperative fire protection system after the current fire season. The Forestry Commission is making little effort to prevent this withdrawal, believing it better to consolidate the work on a more restricted area until such time as better supervision can be provided for the state.

Interest in fire control is increasing rapidly in all portions of the state, and recently, the Delta Chamber of Commerce and the Washington County Chamber of Commerce, together with numerous Delta land owners advocated that all Delta counties be placed under protection. With such an attitude publicly expressed in the section of the state usually considered as least in need of fire protection some idea may be gained of the attitude elsewhere.

It seems evident that as soon as administrative personnel of the Commission can be increased, fire control will again be expanded in a rapid manner.

## THE 1936 FIRE RECORD IN NORTH CAROLINA

By J. S. Holmes,  
State Forester of North Carolina.

The calendar year 1936 was characterized by a sub-normal fire occurrence during January, February, October, November and December, and an abnormally high occurrence during the balance of the year, particularly in the period April-July. In the months of March, April and May, the State organization handled 2,700 fires as against about 2,400 during the entire twelve months of 1935. Of these, nearly 1,100 were in May alone, whereas the average May occurrence during the preceding two years was only about 200. Climatic conditions (very wet early spring and late fall and very dry and windy spring and summer) contributed largely to this result, and these conditions were State-wide.

The abnormal situation taxed financial as well as material resources to the limit. By the first of May we had completely absorbed all of our Federal Clarke-McNary funds, and the end of the fiscal year on June 30 found us several thousand dollars "in the red". Part of this deficit was made up from the Governor's Emergency Fund, but the balance had to be absorbed by cooperative funds for the current fiscal year.

That the Warden organization continued to function during this critical period, despite unavoidable long delay in payment of fire-fighting wages, is evidenced by the fact that the size of the average fire increased only from 48 acres in 1935 to 68 acres in 1936.

North Carolina has consistently adhered largely to the County Protection Unit system. That system is particularly adapted to this State since the county governments receive much the greater portion of the property taxes collected. It is felt to have the following advantages:

1. Minimum number of agencies for the State to deal with per thousand acres of protected area.
2. A demonstrated greater security of such county contracts as against those with private parties.
3. The fact that tax moneys on forest land have little or no opportunity to revert directly to the benefit of those forest lands, unless the county shares in cooperative agreements.

The only disadvantage noted in the County Unit system, and not shared by the Private Cooperators system, is the occasional encounter with political considerations in the appointment of personnel--this



is rare however,

North Carolina also makes use of the Private Protective Association plan, having at present about 430,000 acres in 16 associations under such cooperative agreement. A year-long Association Ranger is employed; fire lines constructed and maintained; trucks, tractors and plows purchased and used on these holdings. Most of this area lies within protected counties, thus giving added protection to listed lands. Assessments upon such private cooperators range between one and five cents per acre.

Until 1935 cooperation by the several counties with the State was purely voluntary. In that year, the Legislature enacted a bill requiring such cooperation (up to a maximum of one-half cent per acre of forest land) by any county which, in the judgement of the State Forester, needs forest fire protection. Obviously, such compulsory cooperation must be and is being handled quite delicately by the State Forest Service. Although this law has been in effect over a year it has not been necessary to use it in getting a county to cooperate. The mere fact that it is on the Statute books is sufficient.

Possibly the best indication of results achieved under North Carolina's protective system is shown by the increase in protected areas during the past seven years. In June 1930 the State had under protection 10,067,000 acres, with forty-four counties cooperating. The figures for June 1937 were 13,774,000 acres, with fifty-nine counties cooperating.

- - - - -

#### FORESTRY IN GEORGIA

By Elmer E. Dyal,  
State Forester of Georgia.

The major activity of the Georgia Forest Service is forest fire protection. Although the total number of acres under organized protection is 300,000 acres less than in 1935, the 4,251,000 acres left is under intensive protection.

Fire statistics for the past two years show a decrease in the number of fires and acreage burned on protected land; the comparative record is as follows:

	<u>1935</u>	<u>1936.</u>
Number of fires	2,401	1,411
Total area burned	284,726 acres	87,623 acres
Per cent of protected area burned	6.2%	2.6%



The decrease in number of acres of land under protection by the Georgia Forest Service in the amount of 300,000 acres has been largely taken over in National Forest purchase units, Resettlement Administration and the Biological Survey.

One of the first timber protective organizations to be organized in Georgia was the Enotah Timber Protective Organization in northeast Georgia. Recently this TPO area was included in a Forest Service purchase unit and is no longer under the supervision of the Georgia Forest Service.

The district foresters at Rome, in northwest Georgia, and Gainesville, in northeast Georgia, have accomplished much in securing cooperation from the counties in fire control work. It is difficult to finance a fire protection program in the northern part of the State unless the counties do participate financially.

The two district foresters referred to above have worked diligently in expanding the fire protection program on a county-wide basis and better results would be obtained if all counties in the State would support the fire protection program financially.

Timber protective organizations have been able to accomplish wonderful results in reducing the number of fires by the purchase of new equipment, such as fire-fighting trucks, new plows, tractors, the installation of radio transmitters and receivers, and by the construction of additional lookout towers and telephone lines.

Personnel of the various TPO's shows an increase also, which results in more efficient fire-fighting crews, patrolmen, lookouts and dispatchers.

In addition to the development of the fire protection program, the Georgia Forest Service, during the past year, produced four and one-half million seedlings in the two State nurseries, which were distributed at cost to the landowners of the State. The demand for seedlings by Georgia landowners has made it necessary to enlarge the nurseries in order to produce stock for distribution during the next planting season.

The forest educational program in Georgia is doing good work in putting before the people of the State the facts of better forest practices. During the past year 2,972 boys in 200 vocational schools received instructions and training in some phase of forestry.

- - - - -

## ARKANSAS FORESTRY

By Chas. A. Gillett,  
State Forester of Arkansas.

Starting practically from "scratch" in 1933, Arkansas has in four years placed some 7,206,000 acres under protection from forest fire, developed a forest nursery growing ten million trees, made a start with state forests through a tax delinquency law under which 1,500 acres have been acquired, and has a regular permanent organization of more than 100 members with staff members to handle fire protection, public relations, planting, forest management, and fiscal control. Credit for the progress thus briefly stated is due in no small measure to the help of the CCC, the several forestry agencies in the U. S. Department of Agriculture, and other cooperating agencies, both State and Federal. Nevertheless Arkansas may be justly proud of the advance she has made. Of the work done during the past year, two features are especially interesting. They are the law enforcement work and the forestry festivals.

The Cole-Crutchfield Fire Law was enacted in 1935 at the request of the State Forestry Commission. The policy has been, and is, to strictly enforce this law, although such a policy was known to be more or less contrary to general practice in many places. In 1935 the Commission prosecuted successfully quite a few cases, and in 1936 the cases won totalled 213. Arkansas believes that this policy is well worth the effort, especially in view of the fact that fire losses in 1936 were low notwithstanding the drought conditions which prevailed over a large part of the State. Strict law enforcement is creating public respect for the law and reducing the number of fires.

Thirteen forestry festivals, drawing 27,300 visitors from the backwoods communities, climaxed Arkansas' public relations work for 1936. The aim of these festivals was to establish good will toward the forest protection work of the State and to carry the message of forest protection directly to the backwoods communities. To do this the festivals were held in the backwoods distant from the larger towns. In this manner it was possible to contact that class of people who actually live in the woods and are comparatively uninformed concerning things outside their immediate communities. If possible these festivals may become annual events, for it is believed they reach a class of people not reached otherwise, who can greatly affect forest protection.

- - - - -

## FORESTRY AND THE CCC IN LOUISIANA

By V. H. Sonderegger,  
State Forester of Louisiana.

In the forestry profession, the State Forester's task is a most difficult one. In most agencies, the forester has definite funds, definite working plans, and can devote all of his time to his work.

The State Forester is given the forest area of a whole State to develop. His funds are limited and he must accomplish a great deal with his limited staff and the limited funds provided by legislative appropriations and cooperative government funds. During his spare time, if he has any, he usually plans a program to complete development and these plans are mostly possibilities if, and when, financial aid can, and will, be available. Proper financial aid, up to four years ago, was a dream that all State Foresters had, but a dream which had never materialized.

In April, 1933, President Roosevelt, realizing the destitute conditions resulting from the depression became vitally interested in the young men, between the ages of 18 and 25 years, who were out of employment and becoming a national problem. Being a staunch advocate of reforestation, he planned the Civilian Conservation Corps and the Emergency Conservation work program to take care of these young men and, at the same time, develop the forest resources of the nation.

After four years of Civilian Conservation Corps camps, I can say that my dreams of proper forest protection improvements have come to pass. Everything I have planned and thought of in the past twenty-five years has materialized, and today Louisiana has 6,200,000 acres of well-protected forest lands and the Civilian Conservation Corps has completed during 1,566,424 man-days the following work:

Bridges	2,764
Lookout Towers	17
Telephone Lines (miles)	1,699.7
Cattle Guards	57
Truck Trails (miles)	2,806.2
Roads - Minor (miles)	23.5
Foot Trails (miles)	29.3
Fire Fighting and Presuppression (man days)	66,334
Fire Breaks (miles)	2,964.9
Roadside Clearing (miles)	954.9
Trailside Clearing (miles)	482.4
Reduction Fire Hazard (acres)	93,996.9
Surveying (miles)	5,728.9



## PROMOTING FORESTRY

By Page S. Bunker,  
State Forester of Alabama.

The term promotion connotes many things among which is the influencing of the mental and physical behavior of human beings. In our attempt to promote forestry, therefore, we must do the things that will bring about the most constructive attitude and action on the part of those who may be in a position to advance or retard the program in view. This implies procedures usually classed as educational. The latter is a broad term covering a great variety of activities beginning with elementary instruction in the three R's and ranging through religious preception, advertising and even propaganda.

In furthering the practice of forestry, however, among land owners and others in a position to adopt sound procedures properly presented, academic and scholastic teachings carry somewhat less force than certain other forms of popular instruction of the general character indicated above. A brief resume of some of these procedures may be in order.

In any so-called educational procedure there are three main considerations, viz., the subject matter, the pupil and the educator. While the first of these over certain periods may be fairly constant, the two latter are both variables. It is necessary to consider the values which these variables must assume that they may efficiently contribute to the result desired. We have seen many instances of the blind attempting to lead the blind, and such conditions are not altogether absent in the promotion of forestry.

The would-be educator of the public in matters pertaining to forestry faces a task requiring for its performance a working knowledge of the principles of general and special psychology that lend themselves to his purpose. While one may proceed according to common sense with results that often are constructive, he is equally apt to find that such a course may lead to errors of a most serious nature. Practically every administrator is convinced that he understands human nature. However, unskilled efforts at influencing other human beings in a proper direction often end in disastrous repercussions. Emphasis is to be placed on the fact that the education of the public in forestry requires of its protagonists study, training and experience considerably greater than are required for the ordinary professional practice of forestry.

It is well to consider the essential qualities of educational material. These may be stated as truth, honesty, interest, intelligibility and timeliness. Certain negative characteristics to be avoided are patronizing, accusations, reprimands and satire, and any impracticable feature that may inspire derision rather than respect for the program.

A great deal of material intended for educational purposes has been issued by numerous agencies. Much of this is good and some even excellent, but a considerable proportion fails to conform to the foregoing standards. In some instances in a single item we may find both good and bad features mixed. As a result of a great deal of unsuitable so-called educational material it may be questioned whether progress in forestry attributed to such material may not have been attained in spite of it rather than on account of it.

Numerous devices for impressing the public with the necessity of forestry have been used. Among these are signs, posters, placards, press copy, envelope stuffers, pamphlets, broadsides, school material, periodical publications, boiler plate, radio, moving pictures, window displays, lectures, field demonstrations, fair exhibits and, most valuable of all, personal contacts. Each of such devices must be adapted to the particular requirements of popular education in forestry. We recur here to the constant and the two variables mentioned in the preceding. The subject matter is forestry, the pupil is the entire public field to be covered and the educator is the worker skilled in the principles of applied education as well as in the particular subject matter to be inculcated. In most cases the necessary knowledge of forestry is not lacking, excepting as to fire protection and forestal accounting. As to the principles underlying popular education, however, mediocrity is very common. Not much more can be said as to the appreciation of the extremely variable character of the recipients of the instruction among the general public. It is mainly in the two latter phases, and in strengthening professional knowledge of fire protection and accounting, that improvements must be sought in our methods.

- - - - -

TREE PLANTING  
THROUGH THE CLARKE-McNARY LAW

Fifty-six million seedlings were raised in 18 State nurseries in Region 8 during 1936. The production of seedlings for planting on farmers' lands began in 1924 with the passage of the Clarke-McNary Act. Progress was slow at first, owing to the ease of natural reproduction, the difficulty of protecting plantations from fire, and the emphasis placed on fire control in preference to other forestry activities. The CCC gave impetus to planting work, along with other phases of forestry, and planting is now expanding rapidly. Each State has at least one forest tree nursery. Georgia and Tennessee have two each, one for the low country and one for the mountains. Texas has a nursery in the eastern pine country and two on the western plains. Next year's production by the States is expected to exceed 75,000,000. Not all of the above seedlings are for Clarke-McNary work, but the Clarke-McNary Law gave this work its start and Clarke-McNary funds are still important in carrying it on.

The Federal Government has set aside \$16,066.67 for distribution to the States in Region 8 for nursery work under the Clarke-McNary law during the fiscal year ending June 30, 1937. The States, as their part, have budgeted for Clarke-McNary planting and other State planting a total of \$78,461.25, made up of State appropriated funds and receipts from the sale of seed or seedlings. Each dollar of Federal money is matched by at least one dollar of State appropriated funds devoted to Clarke-McNary work.

The value of these 56,000,000 seedlings is increased through wide-spread distribution. In some States plantings have been made in practically every county. In no State are plantings confined to a restricted portion of the State. Information with regard to planting work is broadcast throughout the State by means of newspaper articles, lectures, fair exhibits, and pamphlets. Region 8 covers 780,025 square miles or 26 per cent of the United States, and these 18 State nurseries are serving every section.

It is difficult to estimate the value of these 56,000,000 seedlings. It is a fact that people are interested in planting trees. They will protect them and watch them grow. Each person who participates in the raising, distribution, planting, and protection of these trees becomes in some measure a convert to the cause of conservation and development of forest resources.

W. R. Hine,  
Regional Office.

- - - - -  
FOREST LANDOWNERS CONTRIBUTE

No doubt a great many members of the Forest Service often wonder to what extent private landowners in the South are willing to contribute, in cash, toward the cost of protecting their forest land from fire.

Just "how much" amounts to approximately \$429,990 for 1937 (F. Y.), according to the Region 8, Clarke-McNary, Forest Fire Cooperation Budgets. This amount represents approximately 28 per cent of all funds budgeted for fire protection, including State appropriations and Federal allotments.

Private funds for 1937 are 7 per cent greater than in 1936 and represent sustained progress in building up direct financial cooperation of private landowners. Much credit is due the State Foresters for their efforts.

The Clarke-McNary budgets for the States in Region 8 for 1937 (F. Y.) indicate expenditure of private landowners' funds as follows:



Alabama .....	\$28,530	North Carolina .....	\$8,922
Arkansas .....	49,401	Oklahoma .....	6,000
Florida .....	49,455	South Carolina .....	24,548
Georgia .....	163,154	Tennessee .....	766
Louisiana .....	32,000	Texas .....	8,439
Mississippi .....	\$58,775.		

J. W. K. Holliday,  
Regional Office.

### FULMER FORESTS

Purchase of forest lands under the Fulmer Act will proceed very rapidly if funds are appropriated by Congress. Examiners from the Regional Office have investigated 25 tracts covering areas in seven States. Priority of selection of areas is now being considered with the State Foresters.

The Fulmer Act, passed in the 74th Congress (approved August 29, 1935) authorized the purchase by the United States of forest land in the several States for use by the States as forests and parks. The States will reimburse the Federal Government out of the proceeds from the sale of products from the lands.

Fulmer forests are expected to open the way for large scale acquisition of forest land for administration by the States. The areas purchased by the Federal Government will give the States a start in forest ownership and should prove the value of such publicly owned and managed areas. The Fulmer Act requires the States to provide by law for the reversion of title to tax-delinquent forest lands to state ownership, thus enabling them to acquire without expense considerable areas of forest land. Success of the program should lead the States to enlarge their own program of acquisition by purchase.

Eight States in the Region have enabling acts permitting purchase by the U. S. Forest Service under the Fulmer Act. The remaining states are seeking enabling acts in legislatures now in session. Everyone is hopeful that the current year will see the inauguration of this important step in forestry.

### A "ONE-MAN GANG" PUSHES FORESTRY

Elliott W. Reed of Savannah, Georgia, a stock broker, and the owner of a fair sized tract of timberland is really selling forestry in southeast Georgia. Since becoming interested in 1932, when Jack Thurmond was District Forester at Savannah, he has been telling everyone, his friends, associates, and the people in general about timber growing. As a member of the grand jury of Chatham County, he has



obtained appointment of a committee to investigate forestry conditions. This committee of influential citizens went out on the highways and country roads, into the homes of all classes of people, to discuss the forest fire problem. Known "fire bugs" were singled out for special interviews. The findings of the committee were reported to the grand jury and published in the Savannah papers and other papers of the community. Each year since a similar committee has been appointed.

Mr. Reed publishes a monthly news letter out of his own funds, which is sent to the members of the local timber protective organizations and the naval stores operators throughout southeast Georgia. Some five hundred influential citizens get this monthly message with regard to forestry. The publication carries timely information. One issue gave the results of Mr. Reed's own system of utilizing his farm and woods labor in slack seasons planting blank spots in his forest stand with wild seedlings from nature's own seed beds. Another issue carries a recommendation for proper forest management, that the owner (1) cut pulpwood from thinnings and from waste left in logging operations; (2) turpentine conservatively when the trees are of proper size; and (3) reserve the best trees for the production of saw timber. The paper keeps the local people informed with regard to the latest market developments for forest products. It does not overlook the problem of obtaining a fair price for the timber grower for his forest products.

Mr. Reed has accepted the responsibility of acting as President of the Ogeechee Timber Protective Organization. Since taking on this work he has interested many additional forest landowners, with the result that the organization has grown from 40,000 acres to 126,000 acres. Beginning in his home county, Chatham, it has now spread over two adjoining counties, Bryan and Effingham.

When Dr. Charles A. Herty needed wood for his experiments in paper making at Savannah, Mr. Reed arranged to furnish him 500 cords of wood from thinnings on his own lands. It is thought probable that the protection work and the general interest in growing trees in the district of Savannah helped influence the location of Georgia's first paper mill at that place.

Mr. Reed is now the Secretary of the Georgia Forestry Association, and is active in its work. It would not take many individuals like Mr. Reed to accomplish something in forestry in these Southern States. The efforts of this "One-man Gang" are appreciated by all who are interested in the conservation and development of Georgia's forest resources.

- - - - -

STATE AND PRIVATE FIRE PROTECTION  
IN REGION 8.

The accompanying map graphically illustrates the present status of fire protection in the South.

There are approximately 200 million acres of forest land in Region 8 in need of protection from fire, segregated by ownership as follows:

National Forests	8,000,000 acres
Other Federal agencies	2,000,000 "
State and private ownership	190,000,000 "

The vanguard of Southern State forestry work was led by North Carolina which started its work in 1905, and the latest recruit was Arkansas in 1933. According to figures compiled as of February 25, approximately 70,000,000 acres of State and private areas are under some form of State organized and supervised fire protection. There remains about two-thirds of the area yet to be brought under protection. This represents a sizable job and a real challenge to the initiative of the State Foresters. When, however, one considers that only 14 years, as an average for all States, have elapsed since fire control work was first started in the South, it is apparent that commendable progress has been made.

A combined total of \$1,496,746, including \$462,160 of Clarke-McNary funds, has been set up in the fire control budgets of the various States for the fiscal year 1937. This represents an average expenditure of slightly more than 2¢ per acre for all of the States.

Notable among the States for area protected are North Carolina, Texas, and Arkansas, in the order named. North Carolina alone accounts for slightly less than one-fourth of the total protected area, and the combined acreage of these three States represents one-half of the total protected area. Not only do these States have large areas under protection, but the annual fire report for the calendar year 1936 indicates good performance and accomplishments through limiting the percentage of forested area burned, namely, Arkansas 1.34%, North Carolina 1.89%, and Texas 2.9%, during one of the worst fire seasons which the South has experienced for years. Like accomplishments could be listed for other States in some phase of their fire control work, but it is believed that the above suffices for an insight into this big job and how the State forestry organizations are meeting the challenge.

Paul H. Gerrard,  
Regional Office.











